(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau

Organization
International Bureau



I PRINT THE CONTROL OF THE PRINT HERE AND THE PRINT HERE AND THE PRINT HERE AND THE PRINT HERE AND THE PRINT WHE

(43) International Publication Date 29 January 2004 (29.01.2004)

PCT

(10) International Publication Number WO 2004/009212 A2

(51) International Patent Classification⁷:

B01D 33/00

(21) International Application Number:

PCT/ZA2003/000094

(22) International Filing Date:

17 July 2003 (17.07.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

02/5863

23 July 2002 (23.07.2002) ZA

- (71) Applicant and
- (72) Inventor: SCRAGG, John, Edgar [ZA/ZA]; 15 Clematis Road, Grove, Glenhills, 4051 Durban (ZA).
- (74) Agent: BACON, Brian; Brian Bacon & Associates, 2nd floor, Mariendahl House, Newlands on Main, Main Road, 7700 Newlands (ZA).

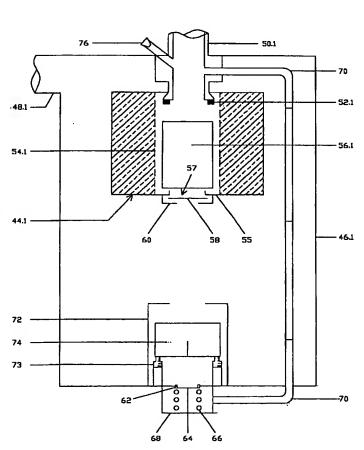
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: FILTERS



(57) Abstract: A filter is disclosed which comprises a housing (46.1) having an inlet (48.1) and an outlet (50.1) and a filter cartridge (44.1) having a core (54.1). A float (56.1) in the core (54.1) has a buoyancy such that it sinks in the liquid product to be filtered and floats in a liquid which contaminates the liquid product. A seat (52.1) is provided at the upper end of the core (54.1) so that, as the level of contaminant liquid in the housing (46.1) increases, the float (56.1) rises in the core (54.1) and presses against the seat (52.1) to isolate the inlet (48.1) from the outlet (50.1) and thus flow through the filter is terminated. A drain outlet is provided at the lower end of the housing (46.1) and comprises a chamber (68) and a seat (62) against which a sealing element is pressed by a spring (66). The chamber (68) is connected to the outlet (50.1) by a pipe (70). Pressing of a vacuum release button (76) opens the chamber (68) to the atmosphere which creates a suction effect that overcomes the force of the spring (66) and allows the seat (64) to move downwards allowing liquid contaminant to exit the housing (46.1) via the pipe (70) and outlet (50.1).